Faculty of Cyber Physical Systems

Department of IoT & Robotics Engineering

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Project Report

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Project Report: Basic cmd based operating system.

Abstract

A customized operating system called ‘Basic cmd based operating system’ was created to offer a complete platform for handling file systems, memory, and processes. The main characteristics, features, and implementation specifics of the ‘Basic cmd based operating system’ kernel are described in this report.

Introduction

‘Basic cmd based operating system’ is a custom operating system designed to provide a comprehensive platform for managing processes, memory, and file systems. The system is designed to be highly customizable and flexible, allowing users to tailor the system to their specific needs.

Background

The Cosmos.Core framework, which offers a reliable and effective basis for creating bespoke operating systems, is used to develop the ‘Basic cmd based operating system’ kernel. Many features are included in the kernel, including as memory management, file system management, and process scheduling.

Objectives

The primary objectives of the ‘Basic cmd based operating system’ project were to:

1. To design and construct a bespoke operating system that offers a comprehensive platform for managing processes, memory, and file systems was the main goal of the ‘Basic cmd based operating system’ project.

2. Provide a highly adaptable and flexible system that enables users to customize it to meet their unique requirements.

3. Put many functions into practice, such as memory management, file system management, and process scheduling.

Methodology

The Cosmos.Core framework was utilized in the development of the ‘Basic cmd based operating system’ kernel, offering a stable and effective basis for creating customized operating systems. Process scheduling, memory management, and file system management are just a few of the functions that the kernel offers.

Implementation

The ‘Basic cmd based operating system’ kernel includes a range of features, including:

1. **Process Scheduling**: The system includes a range of process scheduling algorithms, including FCFS, SJF, Round Robin, and Priority Scheduling.
2. **Memory Management**: The system includes a range of memory management algorithms, including First Fit, Best Fit, and Worst Fit.
3. **File System Management**: The system includes a range of file system management features, including file creation, reading, appending, and updating.

Results

The ‘Basic cmd based operating system’ kernel has undergone successful testing and implementation. A number of features are included in the system, such as memory management, file system management, and task scheduling.

Analysis and Discussion

The goal of the ‘Basic cmd based operating system’ kernel design was to offer a complete platform for file system, memory, and process management. A number of features are included in the system, such as memory management, file system management, and task scheduling. The system has proven to be very flexible and adaptable after being successfully tested and put into use.

Conclusion

An extensive platform for handling processes, memory, and file systems is offered by the ‘Basic cmd based operating system’ kernel, a specialized operating system. Process scheduling, memory management, and file system management are just a few of the features that the system offers. The system has been put into practice and tested effectively, demonstrating its great degree of flexibility and customization.